

## ABSTRACT OF THE DISCLOSURE

A method and apparatus for auto-calibrating an electronic device without interrupting normal operation of the device. An electronic device configured as a high voltage difference amplifier is disclosed having a calibration circuit which couples a calibration excitation signal to a common-mode signal path of the difference amplifier. The difference amplifier includes a variable transfer function circuit which may be used to adjust the common-mode rejection of the difference amplifier. The calibration excitation signal may be a random, pseudo-random, out-of-band, or other frequency shaped signal generated in reference to a clock signal. A calibration error signal is detected from an output signal. The variable transfer function circuit can be adjusted in response to the detected error signal to reduce the calibration error signal. As a result, common-mode rejection errors of the difference amplifier may be reduced while the difference amplifier is coupled to an input signal source.